

M.D. NEWS

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Andrew Will, M.D.

Twin Cities Pain Clinic

Specializing in Nonsurgical
Treatment of Spinal and
Musculoskeletal Pain

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Specializing in Nonsurgical Treatment of Spinal and Musculoskeletal Pain

By Marian Deegan

One of the great rewards of medicine is the ability to make a patient whole again. There is tremendous satisfaction in repairing an injury or curing a disease.

Chronic pain confounds the physician's desire to heal. It is debilitating for the patient, affecting work, straining relationships, causing anxiety and depression and sometimes triggering the development of substance abuse problems. And it can be discouraging to treat. Pain management resources are fragmented, and information about therapy options is not always readily available or accessible. Even with specialized treatments, chronic pain is maddeningly resistant to a definitive cure.

Dr. Andrew J. Will established Twin Cities Pain Clinic to

provide resources for physicians and hope for patients grappling with the frustration of persistent, unresponsive pain. Dr. Will's interest in pain treatment began with his decision to specialize in physical medicine and rehabilitation. Following his grandfather, father and older brother into medicine, Dr. Will started his practice with Sister Kenny Rehabilitation Associates at Abbott Northwestern Hospital, focusing on spinal cord injury rehabilitation. Working with paraplegic and quadriplegic patients shifted his definition of success in his profession.

"Many doctors thrive on the satisfaction in fixing a patient with one or two hours of surgery," he says reflectively. "Physical medicine and rehabilitation requires a different mindset. For my patients,

Dr. Will and nurse practitioner Amy Krenzer review MRI films with a patient during an initial consultation.



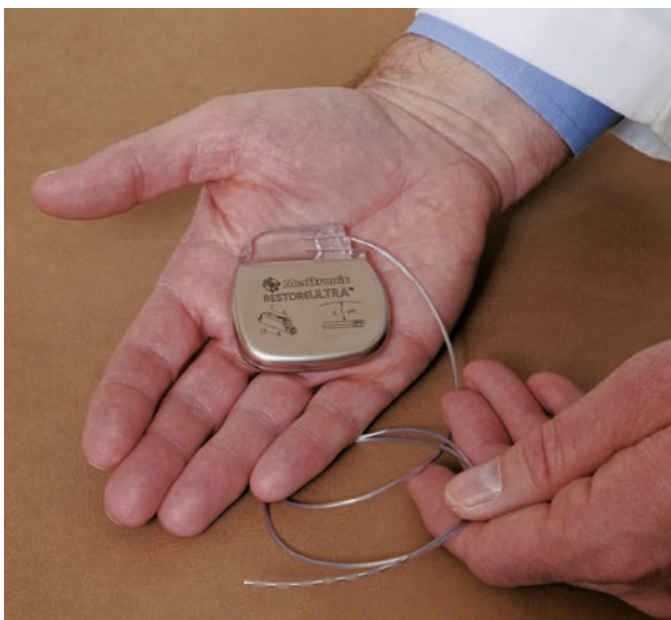
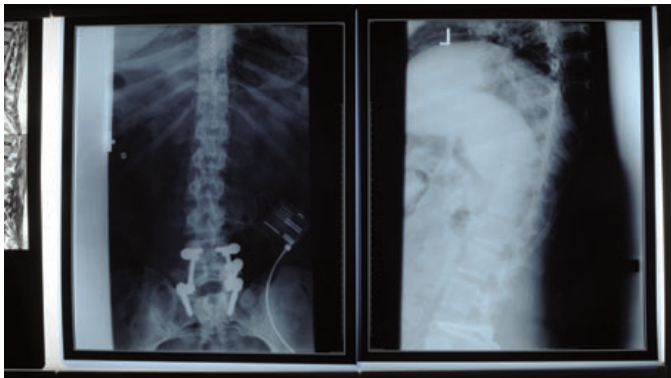
success frequently means incremental steps toward progress. Certainly, we never give up on a cure, and we do cure a number of our patients. However, patients who have tried conservative treatment options over a long period of time without resolving their pain problems face a diminished probability of a cure. This does not mean that there is no hope. There is always an opportunity to reduce pain and improve quality of life. We can help control symptoms to a tolerable level. If we can get pain down to a three or less on a scale of 10, most people can go about their lives and be productive and achieve their goals. For me, pain reduction is a definition of success. When you reduce pain, you are making a difference in people's lives. That can be very satisfying."

Currently, pain management is addressed by doctors in a variety of specialties, including physical medicine and rehabilitation, radiology, anesthesiology, neurology and surgery. "Ten years ago," Dr. Will explains, "less than 5% of physical medicine and rehabilitation doctors dedicated themselves to pain management. Today, it

might be as many as a third. I'm a perfect example. Practices like mine are laying the groundwork for an established pain medicine specialty in the future. That's exciting. My grandfather was one of the founding members of the American Academy of Family Physicians. I hope to be able to say that I was there when pain medicine became a specialty. New physical therapy techniques, devices, procedures and medications for pain management are being developed, and they require a special subset of skills. This is moving us toward the establishment of a pain medicine residency or an interventional pain management specialty; both have been proposed within the last five to 10 years. When the breadth of knowledge is large enough, pain management will become its own specialty. This trend is not unique to pain treatment; it is the way specialties and subspecialties grow in all fields of medicine."

Dr. Will's practice has grown in response to the needs of his patients and referring physicians. His clinic offers a comprehensive range of treatment options and 15 support personnel, including

This implantable neurostimulator battery is surgically placed most commonly in the upper gluteal area and the attached lead with electrodes is inserted along the epidural space. On the first (left) X-ray, you can see the 16 neurostimulator electrodes that lay along the thoracic epidural space. The lateral X-ray (right) confirms the dorsal epidural placement of the leads.



three registered nurses, four nurse practitioners and three physical therapists. Dr. Will advocates for a best-practice approach to pain management through his service as the President of the Minnesota Physiatric Society. He has testified at the state capitol, presenting physician concerns regarding proposed legislation that addressed physical therapy and other pain management services.

Twin Cities Pain Clinic puts an emphasis on spine-related pain. “Although we see peripheral joint pain of the shoulder, knee and hip,” says Dr. Will, “we focus on understanding the issues around spine pain with a comprehensive evaluation that includes detailed testing and interpretation. We do not rely on radiology reports; I personally review all MRI scans here at our office. We have X-ray view boxes in every examination room so I can talk patients through their test results and interpret the films. When a spinal injection is appropriate, we know all the different types and are able to determine which one would be best for a particular patient.”

An array of treatment is offered, from more conservative physical therapy and MedX therapy to emerging radiofrequency and implantable devices. “We have a thorough understanding of the procedures available, and we aren’t biased toward any single approach,” Dr. Will says. “We begin with the least invasive and safest

therapies. Physical therapy and MedX are two tools in our toolbox. We give a patient our honest opinion about what we think would work best for them. When we are not able to manage or reduce pain through conservative therapies, we may consider spinal injection procedures. I perform over 1,000 of these procedures each year. I know what to expect, and I know which patients are likely to respond well to them. Our clinic is also willing to handle patients with long-term medication management needs. We can provide all the support needed to help people get appropriate treatment and thorough follow-up.”

Eighty percent of Americans will have back pain in their lifetime. Fortunately, much of that pain is short lived. Studies show that the majority of back strains will resolve in a month or so. Only 10% to 20% of back pain issues become chronic. Dr. Will estimates that only 5% of the patients he sees early at the onset of pain will go on to have surgery. He sees a significant number who have had surgery but continue to have persistent pain and may be candidates for evolving implanted device treatments.

“If you look at our demographics,” says Dr. Will, “a lot of our patients are in their 30s, 40s and 50s. This age group is under a lot of pressure to work and be active. When they come to us, they

Once the leads for the neurostimulator device are placed in the epidural space, the ends of the wires are hooked up to an external program for one last check, while the patient is awake, to verify accurate pain coverage before the battery is surgically implanted.



are looking to reclaim quality of life. Most pain management treatments are safe. We would be reluctant to do anything high risk because these are not life-threatening problems. However, just because an issue isn't life threatening doesn't mean that it doesn't affect quality of life. Our objective is to improve the quality of day-to-day life for our patients. We may not be saving lives, but we are helping patients get back to the life they want for themselves."

In general, pain problems are treated first with physical therapy and then with more invasive procedures like epidurals. Referral for surgery is considered only after less-invasive options have been explored without adequate results. If surgery does not deliver results, or if surgery is not an option because of a health condition or because a surgeon



PHOTOS BY DAVID GINSBERG

The open arrangement of the back office allows for close collaboration amongst Twin Cities Pain Clinic team members.

Dr. Will is in the OR at Fairview Southdale Hospital as he begins the surgical implantation of a permanent neurostimulator device.



cannot identify a clear anatomical problem on the spine, then Dr. Will may consider implantation options to control pain.

Dr. Will works with two implantable devices, a neurostimulator and an intrathecal pump. The neurostimulator uses electricity to block out pain, and the intrathecal pump delivers pain medication into the spinal fluid to block out pain.

"When we consider these devices," explains Dr. Will, "the patient must be fully educated about the risks and benefits. We take the patient through education preparation and the usual insurance authorizations. In addition, candidates undergo a mandatory trial before either of these devices is permanently implanted."

The neurostimulator is very low maintenance. It requires periodic recharging, but once it is implanted, the patient can recharge it at home. The implantable pump requires higher maintenance. It has to be refilled via needle through the skin every few months. A drawback to the pump option is linked to the limitations of the opiate medications available. Although initial pump results may be successful, over time, patients can build up resistance to the medication, reducing its effectiveness.

The neurostimulator's advantages make it the favored first option to try. "Three companies manufacture neurostimulator devices," Dr. Will explains, "and they are all competing to develop a better device by adjusting the number and spacing of the electrodes on the leads, and by adjusting the voltage or current delivered through each electrode. These adjustments provide the patient with more choice about the delivery of the electricity. That really does translate into better pain coverage."

A neurostimulator trial involves the insertion of leads, via needle, into the patient's spine. There is no incision. The wire leads are left

in place for a week. An adjustable external computer programmer controls electricity delivery. “This trial gives the patient a perfect example of what they would feel with the implanted device,” explains Dr. Will. “After a week, we remove the leads here in our office. Of the patients who undergo neurostimulator trials, perhaps 75% have a favorable outcome and elect to have me surgically implant the permanent device.” Dr. Will collaborates with Dr. Jon McIver and Dr. Sabrina Walski-Easton of Neurosurgical Associates to carry out the permanent implantation surgery.

Dr. Will has been working with the pump device designed by Medtronic for 12 years. “Today’s pump is drastically different from the Medtronic pump I first worked with in 1996,” he says. “Now, the patient can deliver different rates of medication throughout the day. More significantly, research is being conducted to develop new drugs, including nonopiate medications, for pump use. We already know that some opiates work better long term than others. The researchers’ goal is to reduce patient resistance to medications over time by finding a better alternative to opiates. As more effective medications are cleared by the FDA, we’ll have even more options.”

The implantable pump trial calls for insertion of a catheter into the spinal fluid. During the trial, an external pump delivers pain medication such as morphine into the spinal fluid and the patient’s pain response is monitored. “Basically,” says Dr. Will, “this is a low-risk trial run of the procedure with no surgery. The patient can

In 2008, Dr. Will accompanied his father, Dr. Ted Will, on a Rotarian medical mission to Honduras. In the mountain village of Buena Vista, outside Santa Barbara, Dr. Will worked in a primary care clinic checking patients for ear infections, worms, heart murmurs, neurological problems and skeletal abnormalities. He also did physiatrist work at a clinic in Santa Barbara.



Physical therapist Leslee Harper teaches a patient how to use the MedX equipment, which is specifically designed to strengthen spinal extensor muscles to reduce low-back pain.

PHOTO BY DAVID GINSBERG

experience the effects before they have to undergo the full invasive procedure. It’s up to the patient to decide if they want to do the permanent procedure.

“Family physicians do a wonderful job of treating pain complaints, but we recognize that doctors may become discouraged when pain issues become chronic,” says Dr. Will. “Referring doctors will apologize for ‘dumping’ a patient on me. I don’t want them to feel that they have to apologize; treating pain is what we do and we are passionate about doing it. We want doctors to feel comfortable contacting us with questions, and we want to help them manage patient pain as needed. We are careful to look at all options and screen patients carefully before we put them through treatments. We don’t take chances. Through our clinic resources and through close collaboration with psychologists, spine surgeons and complementary pain programs, we are able to offer a very comprehensive approach to pain management.”

The Twin Cities Pain Clinic logo is a sunrise — a symbol of optimism and a fresh start. “Many people who have had pain for a long time feel that there is no hope,” says Dr. Will. “Over the years, my patients tell me that our pain therapies have changed their lives. One of our patients is a police officer with chronic back pain. He is able to control his pain and continue to work through regular therapy in our MedX program. Another patient was disabled by severe chronic back pain despite five back surgeries. An implanted pump allows him to care for his home and return to the gardening he loves. An artist in her 60s underwent traction at our clinic that gave her complete relief from neck pain. We helped these patients reclaim the bright days they never thought they’d see again. That’s my definition of success.” ■

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